

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

TAGUATINGA (BRAZIL)

Altitude: 604 m.

Latitude: 12°24'S Longitude: 46°26'W

Temperature observation period.: 1961-1990 (30)

Rainfall observation period....: 1961-1990 (30)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	24.30	30.30	20.10	37.60	16.60	305.0	115.21
Feb.	24.30	30.20	20.20	36.40	17.20	245.0	101.60
Mar.	24.40	30.40	20.20	35.70	17.10	238.0	111.33
Apr.	24.60	30.70	20.30	36.30	15.80	142.0	106.48
May.	20.30	31.00	19.40	34.50	13.90	22.0	61.17
Jun.	23.60	30.70	18.30	34.50	12.20	5.0	91.17
Jul.	23.40	30.80	18.00	35.00	13.00	2.0	92.62
Aug.	23.40	32.60	19.50	37.50	14.40	3.0	95.43
Sep.	26.50	32.60	21.30	38.30	15.20	30.0	135.73
Oct.	25.40	32.10	21.00	38.70	16.20	145.0	127.94
Nov.	24.50	30.80	20.40	39.20	14.30	342.0	112.70
Dec.	24.00	30.00	20.00	38.20	14.80	286.0	112.02
Year	24.06	31.02	19.89	36.83	15.06	1765	1263.4

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	745
Compensated thermicity index.....(Itc):	745
Simple continentality index.....(Ic):	6.2
Diurnality index.....(Id):	13.1
Annual ombrothermic index.....(Io):	6.11
Monthly dry ombrothermic index.....(Iod1):	0.09
Bimonthly dry ombrothermic index.....(Iod2):	0.11
Three monthly dry ombrothermic index.....(Iod3):	0.14
Four monthly dry ombrothermic index.....(Iod4):	0.35
Annual ombro-evaporation index.....(Ioe):	3.28
Annual positive temperature.....(Tp):	2887
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	704
Positive precipitation.....(Pp):	1765

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	7	0	2	3	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - Low Euhyperoceanic

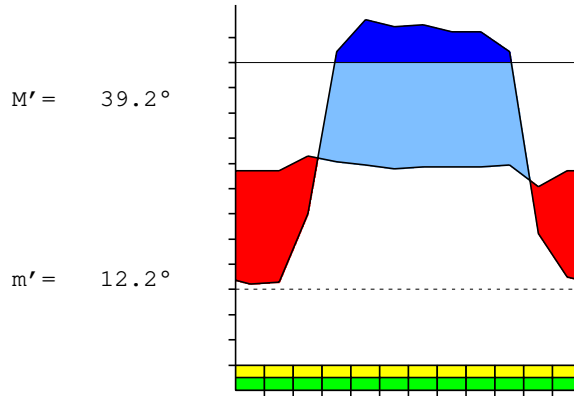
Bioclimate(Variant): TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW HUMID

TAGUATINGA (BRAZIL)

604 m

P= 1765      12° 24' S      46° 26' W      30/30 y.  
 T= 24.1°      Ic= 6.2      Tp= 2887      Tn= 0  
 m= 19.4°      M= 31.0°      Itc= 745      Io= 6.1



TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)  
 UPPER INFRATROPICAL LOW HUMID

WATER INDEX CARD

TAGUATINGA (BRAZIL)

Altitude: 604 m.

Latitude: 12° 24' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	23.4	93	2	0	0	2	91	0	11	-0.9
Aug.	23.4	95	3	0	0	3	92	0	5	-0.9
Sep.	26.5	136	30	0	0	30	106	0	3	-0.7
Oct.	25.4	128	145	17	17	128	0	0	1	0.1
Nov.	24.5	113	342	83	100	113	0	146	74	2.0
Dec.	24.0	112	286	0	100	112	0	174	124	1.5
Jan.	24.3	115	305	0	100	115	0	190	157	1.6
Feb.	24.3	102	245	0	100	102	0	143	150	1.4
Mar.	24.4	111	238	0	100	111	0	127	138	1.1
Apr.	24.6	106	142	0	100	106	0	36	87	0.3
May.	20.3	61	22	-39	61	61	0	0	43	-0.6
Jun.	23.6	91	5	-61	0	66	25	0	22	-0.9
Year	24.1	1263	1765	*	*	949	314	816	816	*

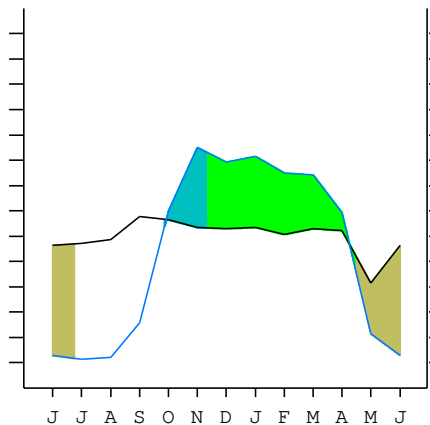
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

TAGUATINGA (BRAZIL)

12°24' S    46°26' W    604 m 30/30 y.

T= 24.1      Ic= 6.2      TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)  
 m= 19.4      Tp= 2887      UPPER INFRATROPICAL  
 M= 31.0      Tn= 0      LOW HUMID  
 M' = 39.2      Itc= 745  
 m' = 12.2      Io= 6.1  
 P= 1765      mm    ———  
 PE= 1263      mm    ———

Imbibing	26 Sep.
Saturation	11 Nov.
Reserve Use	15 Apr.
Deficit	22 Jun.



TAGUATINGA (BRAZIL)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2b]  
 + Type .....: A. Hyperoceanic  
 + Subtype .....: 2. Euhyperoceanic  
 + Variant .....: b. Low  
 Thermic types [A2.A1]  
 + Latitudinal zone ....: A. Warm  
 + Latitudinal belt ....: 2. Eutropical  
 + Thermic type .....: A. Warm  
 + Thermic subtype .....: 1. Torrid  
 Bioclimatic types [A4.1a.7b]  
 + Macrobioclimate .....: A. TROPICAL  
 + Bioclimate .....: 4. PLUVISEASONAL  
 + Bioclimatic variant ..:  
 + Thermic type.....: 1. INFRATROPICAL  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 7. HUMID  
 + Ombrothermic subtype : b. LOW  
 Bioclimatic Classification .....: Trde.Itr.Hum

TAGUATINGA (BRAZIL)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1353  
 Coldest semester of the year.....(Psw): 412  
 Warmest four months period of the year.....(Pcm1): 803  
 Following warmest four months period.....(Pcm2): 930  
 Positive precipitation dryest 3 months.....(Ppd): 10  
 Positive precipitation dryest 2 months.....(Ppd2): 5  
 Positive precipitation dryest 1 month.....(Ppd1): 2  
 Positive precipitation warmest 3 months.....(Pps): 517  
 Positive precipitation warmest 2 months.....(Pps2): 175  
 Positive precipitation warmest 1 month.....(Pps1): 30  
 Positive precipitation coldest 3 months.....(Ppw): 29  
 Positive precipitation coldest 2 months.....(Ppw2): 27  
 Positive precipitation coldest 1 month.....(Ppw1): 22

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	10	517	836	402

Tropical rainfall rhythms: 1 > 4 > 2 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 26.5  
 Average coldest month [T].....(Tmin): 20.3  
 Maximum temp. warmest month [M].....(Tmmax): 32.6  
 Minimum temp. coldest month [m].....(Tmmin): 18.0  
 Absolute Max.temp. warmest month [M'].....(Tamax): 39.2  
 Absolute Min.temp. coldest month [m'].....(Tamin): 12.2  
 First warmest contrasted month [M].....(Tcmax): 32.6 (8)  
 First coldest contrasted month [m].....(Tcmin): 19.5 (8)  
 Dry station temperature.....(Td): 704  
 Positive temperature dryest 3 months.....(Tpd): 704  
 Positive temperature dryest 2 months.....(Tpd2): 468  
 Positive temperature dryest 1 month.....(Tpd1): 234  
 Positive temperature warmest 3 months.....(Tps): 764  
 Positive temperature warmest 2 months.....(Tps2): 519  
 Positive temperature warmest 1 month.....(Tps1): 265  
 Positive temperature coldest 3 months.....(Tpw): 673  
 Positive temperature coldest 2 months.....(Tpw2): 439  
 Positive temperature coldest 1 month.....(Tpw1): 203

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## SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)	o	o							o	o	o	o
Dryest semester...(Smd)				o	o	o	o	o	o			
Warmest 4 months...(Cm1)									o	o	o	o
Dryest 4 months...(Cmd)					o	o	o	o				
Vegetation Activity(Pav)	o	o	o	o	o	o	o	o	o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)												
Pregelid.....[m' <=0] (Pf)												
Agelid.....[m' > 0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o

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## OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.72  
Mediterranean index of January.....(Im1): No  
Mediterranean index of January & February.....(Im2): No  
Mediterranean index of December to February...(Im3): No

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	2860	3050	2450	2380	1420	220	50	20	30	300	1450	3420
Tp	240	243	243	244	246	203	236	234	234	265	254	245
Io (Iom)	11.9	12.6	10.1	9.75	5.77	1.08	0.21	0.09	0.13	1.13	5.71	14.0
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	8360 / 726			4020 / 693			100 / 704			5170 / 764		
Io (Iot)	11.52			5.801			0.142			6.767		
Semesters	December-May						June-November					
Pp(x10)/Tp	12380 / 1419						5270 / 1468					
Io (Iosm)	8.724						3.590					

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## Aridity Value Index (AVI)

[10xPP/TP=IO]: 17650/2887=6.11 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2860	3050	2450	2380	1420	220	50	20	30	300	1450	3420
Tp [T*10]	240	243	243	244	246	203	236	234	234	265	254	245
Iom [Pp/Tp]	\$\$	\$\$	\$\$	975	577	108	21	9	13	113	571	\$\$
Avm [200-Iom]	***	***	***	***	***	92	179	191	187	87	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	8360 / 726			4020 / 693			100 / 704			5170 / 764		
Iot [Pp/Tp]	1152			580			14			677		
Avs E[Avm<200]	***			***			557			***		
Lower ultrahyperarid [1]							Upper ultrahyperarid [2]					
Lower hyperarid [1]							Strong lower semiarid [2]					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp): 6.20
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....	28.68
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....	13.66
+ Hyperoceanic (-20<CI<20)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....	1.21
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T] .....	73.36
+ Temperate warm (100>R>60)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....	51.82
+ Humid (60>Ia>30)	
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....	238.91
+ Humid (Q>90)	
I of Dantin & Revenga (1940) [DR=100*T/P] .....	1.36
+ Humid (2>DR>0)	
Aridity Index of UNEP [I=P/PE] .....	1.40
+ Humid (I>0.65)	
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....	66.27
+ Low (60<K<90)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....

- + Climate .....
- + Region .....
- + Thermic type: 1. Megathermic

Thornthwaite (1948)													
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
P-E ratio	1.29	1.01	0.98	0.55	0.08	0.01	0.00	0.01	0.09	0.55	1.46	1.21	
T-E ratio	10.93	10.93	10.98	11.07	9.13	10.62	10.53	10.53	11.92	11.43	11.02	10.80	
Precipitation-effectiveness:	72.66						Temperature-efficiency .....						129.91
Moisture Index [MI=100*(P-PE)/PE] .....												39.70	
+ B1.Humid low-humid (20<MI<40)													
Index of dryness [DI=100*d/PE] .....												24.86	
+ Moderate deficit (16.7<DI<33.3)													
Index of humidity [HI=100*s/PE] .....												64.56	
+ Strong surplus (20<HI)													
Potential Evapotranspiration PE .....												1263.41	
+ Forth mesothermic (997<PE<1440)													

